Signature _____ **Name_____**

cs30x____

Student ID _____ **Score:**

Quiz 1
CSE 30
Fall 2005

#1. Show the binary representation of **-425$_{10}$** in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one's-complement

c) two's complement

#2. Convert **274$_{10}$** into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

#3. Fill in the Condition Code bits for the following addition instructions (8-bit two's-complement numbers):

```
  10101010
+ 10011001
----------
```

N	Z	V	C

```
  11110110
+ 00001010
----------
```

N	Z	V	C

(over)

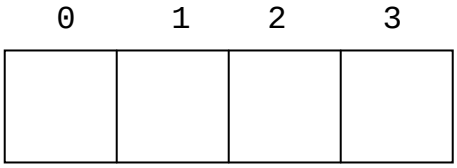
#4. Powers of 2

256G = $2^{\_\_\_\_}$

2^{13} = _____ (in terms of K, M, G, etc.)

#5. In a Big-Endian architecture, show how the bytes are laid out in memory for the following statement (write the hexadecimal values of the bytes in the appropriate memory locations):

```
long shot = 0x0EB903471;
```



What is the hex value of the most significant byte? _____